FALL 2013

THE Connecticut Economy

A UNIVERSITY OF CONNECTICUT QUARTERLY REVIEW

GROWING AN ECONOMY THAT WORKS

Facing Our Policy Limits

Harnessing University Research

Finding a Development Niche

CONNECTICUT ECONOMIC INDICATORS

(Percent change: 2012-Q2 to 2013-Q2)

Indicators of Current Economic Activity

Total Nonfarm Jobs	+0.8%
Number Unemployed	-4.7%
Labor Force	-1.7%
Manufacturing	
Jobs	-2.0%
Average Weekly Hours	+0.7%
Average Hourly Earnings	-9.9%
CT Mfg. Production Index	-2.3%
New Auto Registrations	+5.1%
Travel and Tourism Index	-2.3%
Bradley Airport	
Passengers	-0.7%
Freight	-3.6%
State Tax Receipts	
Income	+11.8%
Sales	+2.7%
Real Estate Conveyance	+8.3%
Electricity Sales	+3.8%
State Exports	+1.2%
Personal Income (est.)	+3.2%
Coincident GDI	+0.6%

Indicators of Future Economic Activity

Initial Unemployment Claims	-6.3%
Housing Permits	+17.7%
Net New Business Starts	+4.2%
Leading GDI	-12.1%

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TAKING STOCK

Some Much–Needed Momentum

Connecticut's economy built some much-needed momentum in 2013-Q2, as the state added nearly 6,800 nonfarm jobs—double the previous quarter's rate of growth. Weekly earnings inched up too, though they remain below year ago levels.

Education and medical care accounted for the lion's share of the net job gains, 4,200 in total—3,700 from medical care alone. An aging population, new technologies, and demands for better care have made this a virtually recession-proof corner of the economy. Despite the uptick in jobs, education and medical care worker wages were 1% lower in 2013-Q2 than in 2012-Q1.

Construction, up 3,600, was close behind, as strong growth in residential and commercial structures more than offset a slowdown in non-building construction (e.g. roads, bridges). And hourly pay climbed 1.5% between the quarters.

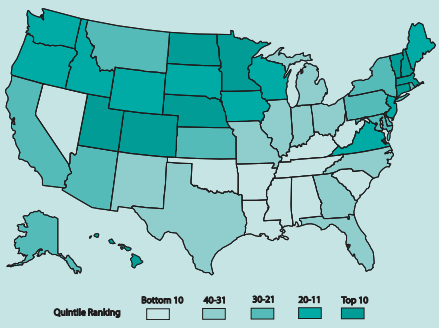
But key sectors remain in retreat. A third consecutive quarterly loss in science and technology jobs, this time of 1,300, weighed down professional and business services. Factories sliced 1,300 jobs, too, the third cutback in four quarters. And retailers had second thoughts about their 2,600-job expansion in 2013-Q1; they took back 1,000 of those posts in 2013-Q2.

On net the recovery is picking up speed and continued improvement is in the forecast (page 14). Additions of 4,000 to 5,000 jobs quarterly are well within reason, with Hartford and Bridgeport-Stamford leading the way (page 12).

This quarter's issue offers a variety of perspectives on economic development. We examine the role that national, regional and state forces play in Connecticut job growth. We look, too, at the impact research universities have on area economies, and how UConn, specifically, turns knowledge into economic value. Plus, a development practitioner tenders suggestions on how Connecticut might better differentiate itself to attract jobs.

It's no secret that Connecticut has struggled to grow in recent years. But our search for remedies often obscures the fact that our state is home to one of the most developed economies in the world. Economic development means more than good jobs and high wages. It encompasses many additional facets of well-being including housing, community, education, environment, civic engagement, health, life satisfaction, safety, and work-life balance. Add them all up, and Connecticut ranks sixth among states (map). Not bad for an economy still laboring to recover.

CONNECTICUT IS AN ECONOMIC DEVELOPMENT LEADER



To development economists, economic development means more than good jobs and high wages. It is a much broader concept that encompasses both economic and social well-being. The Organization for Economic Cooperation and Development (OECD) measures economic development across countries with its "Better Life Index" which combines data on housing, income, jobs, community, education, environment, civic engagement, health, life satisfaction, safety and work-life balance. The map shown here ranks U.S. states with a similar index constructed using data on housing quality, household income, employment, volunteer activity, educational attainment, voting participation, life expectancy, happiness, crime and working hours. Despite its struggle to recover from the latest recession, Connecticut ranks sixth among states in a country that leads the globe in economic development.

IS CONNECTICUT MASTER OF IT'S OWN ECONOMIC FATE?

BY STEVEN P. LANZA

Policy advocates from opposing ends of the political spectrum often clash over competing plans to get the economy moving. While their prescriptions might differ, they implicitly share a common premise: the right policy can dramatically improve the economy's performance. But how much of Connecticut's economic fate depends on what happens within our own borders—and is, potentially, under our control—and how much depends on what transpires beyond the state?

Psychologists and philosophers have long debated the roles of free will and determinism in explaining human behavior. Determinists believe that our actions are completely ordained by exogenous factors, like rewards, punishments and genetics. Free-willers, by contrast, insist we are authors of our own fate; that despite the forces acting on us, we are ultimately in a position to will a change in our own behavior.

Similar questions arise in the context of the economy. Some analysts believe that economic outcomes are largely the result of broad global and national market forces. Others see a key role for strategic investments or incentives that might alter local trajectories and enhance economic growth. In a small state like Connecticut, with 1.5% of the nation's population and barely 1/10 of 1% of its land mass, how much of our economic fate lies in our own hands?

SPOTLIGHT ON JOBS

Policymakers are often preoccupied with efforts to grow jobs. Jobs give workers a shot at the American Dream: a home, a car, a pension, the chance to get out of and stay out of debt. Job growth also improves the re-election prospects of current officeholders.

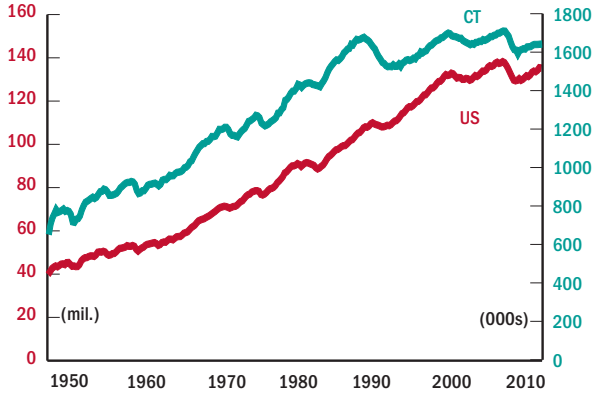
And much has been made of the recent lag in Connecticut's job performance. We've only gained back about half the jobs lost in the last recession while the country has reclaimed three quarters. But sluggish job growth is not a new phenomenon; it has been a consistent feature of Connecticut's economy. (One consolation is that wages and salaries here have long surpassed national averages.)

Over the long, nearly 70-year post-War era to the present Connecticut jobs have grown at an average annual rate of 1.3% compared with 2.0% for the nation as a whole (Graph 1). But that wide swath of time contains at least two distinct intervals: the Cold War period, from 1946 to 1991, when Connecticut jobs grew fairly steadily, and the period since then, distinguished by the collapse of the Soviet Union and the end of the Cold War, when the state has struggled to make any headway.

Even in its heyday, Connecticut lagged the U.S. in jobs. During the Cold War years, jobs grew at an average annual rate of 1.9% in Connecticut, compared with 2.2% for the U.S. The gap between the two rates has, however, widened in recent years. Since 1991 Connecticut growth plunged to a 0.3% annual rate compared with 0.9% for the nation as a whole.

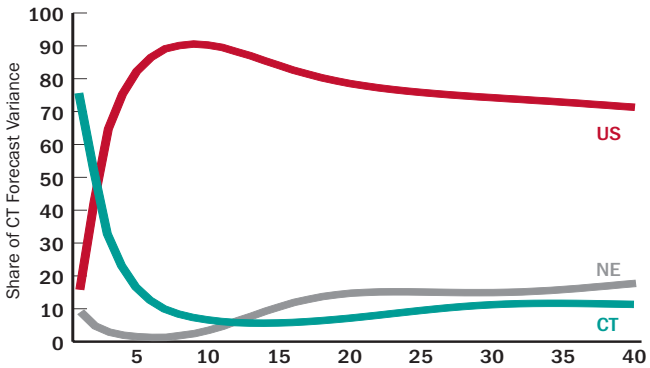
There is no shortage of presumed suspects for the state's lagging job growth: high taxes, crumbling infrastructure, educational achievement gaps, inadequate investments in strategic industries—the list goes on, though it varies by the political orientation of the enumerators. What's not clear, however, is how much we can control local outcomes even under the most enlightened of policy regimes.

GRAPH 1 US AND CT JOB GROWTH



SOURCE: *The Connecticut Economy*, based on data from U.S. Bureau Labor Statistics.

GRAPH 2 VARIANCE DECOMPOSITION OF CT JOBS AT VARIOUS TIME HORIZONS (QUARTERS AHEAD)



SOURCE: *The Connecticut Economy*, based on data from U.S. Burear Labor Statistics.

ECONOMIC INTERRELATIONS

Connecticut's economy is not an island unto itself; it is part of a broader regional economy embedded in an even larger U.S. economy. And economies at all levels have faced growing global competition in recent years. Clearly, what happens in our small corner of the world depends not only on events here, but also on what goes on in the region and the nation as a whole.

A good way to explore these various linkages is through what economists call vector autoregression or VAR models. Despite their intimidating name, VARs are simply sets of equations that relate variables of interest, jobs in our case, to their own past values or lags, plus lags of other, related variables. We're interested in what a model of lagged Connecticut, regional and U.S. jobs might tell us about the relative importance of each in determining jobs here in the Nutmeg State.

NUTS AND BOLTS

For both time periods—during and after the Cold War—our base model is a six-lag VAR of jobs in U.S., the Northeast and Connecticut, using seasonally-adjusted, quarterly data. To avoid "double-counting," the U.S. measure excludes jobs in the Northeast and Connecticut so it gauges the condition of the economy in the rest of the U.S. outside our region. Similarly, the Northeast includes New York, New Jersey and the rest of New England beyond Connecticut.

Generally, models with longer lags have superior explanatory power. But models with long lags are also more complex and the simpler the model the better. The six-quarter lag length was identified as optimal by a test statistic called an "information criterion" that balances explanatory power against simplicity.

Following standard VAR modeling practices, jobs data are converted to natural logarithms, and expressed in levels rather than growth rates (though we'll look at growth models later for a reality check). The model also assumes that local employment shocks—sudden, unexpected changes in employment—do not immediately affect national or regional employment. Instead, national shocks take precedence and are transmitted first to the region and then to the state.

SOURCES OF VARIATION

The coefficient estimates of VAR models are seldom of any interest; instead other tools are used to present the results from a VAR in more useful ways. One tool is a variance decomposition of VAR forecast errors, which helps identify the factors that are most important in explaining changes in the variables.

Graph 2 shows the variance decomposition of the forecast errors for the post-Cold War VAR model at various time horizons. At relatively short horizons most of the variation in Connecticut jobs is the result of Connecticut-specific innovations. One quarter ahead, 75% of the variation in jobs stems from Connecticut shocks; two quarters out it's more than half. In other words, if we were to try to predict where Connecticut jobs might be headed over the next six months, the error in our prediction will largely come from changes at the state rather than the national or regional levels.

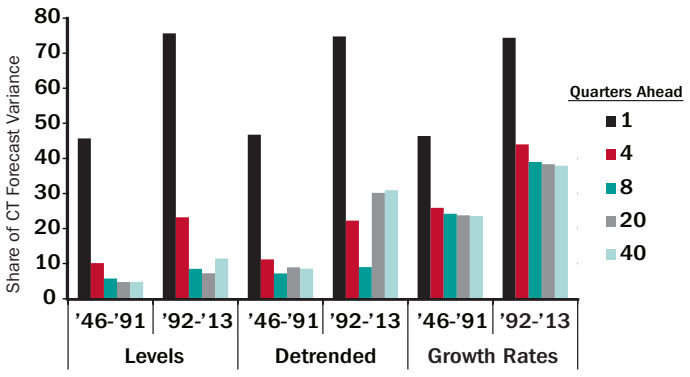
As the timeline lengthens, however, the picture reverses. In a year-ahead (4-quarter) forecast, 75% of the variation in jobs will originate at the U.S. level and less than 25% at the state. The Connecticut share drops to 10% or below within two years and essentially stays there for horizons extending out a decade.

So short term, state effects account for the vast proportion of the variance in Connecticut jobs. In the medium and long run, however, national and regional effects reign supreme.

DÉJÀ VU?

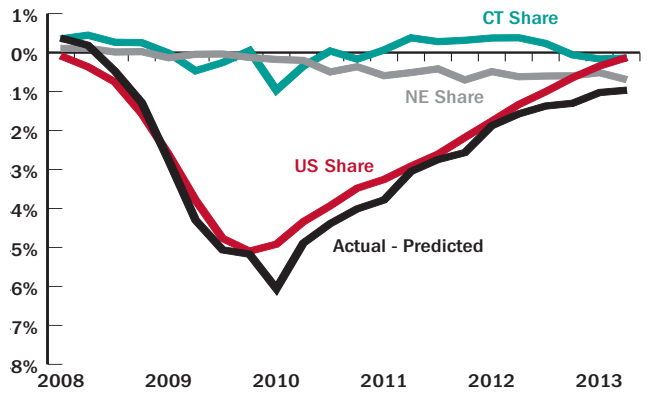
In what passes for lively debate in academic circles, economists argue about whether VARs are best modeled using variables measured in levels, in detrended levels, or in growth rates. Let's consider all three, first to provide a reality check on the results discussed above, and second to offer

GRAPH 3 CT-SPECIFIC SHARE OF VARIANCE UNDER ALTERNATE MODELS



SOURCE: *The Connecticut Economy*, based on...

GRAPH 4 HISTORICAL DECOMPOSITION OF CT'S RECESSION AND RECOVERY



SOURCE: *The Connecticut Economy*, based on...

insight on another key question about Connecticut's economy.

The state's economy has undergone structural changes over time, particularly in the last two decades, as the abrupt slowdown in job growth testifies. As recently as 1969, factory jobs accounted for more than a third of Connecticut employment, now they are barely 10%. Financial activities, leisure and hospitality and business services all have a higher profile now than they did at the start of the 1990s. Have these and other changes made us more sensitive or less to national and regional trends?

Graph 3 plots the Connecticut-specific sources of employment variation from six separate VAR models at five discrete time horizons—one quarter ahead, and one, two, four, and ten years into the future.

The first pair of bar graphs shows results from VARs in levels for the 1946 to 1991 and 1992-2013 periods. Although the Connecticut-specific shares of employment variation appear to have grown a bit between the two periods, they are of a similar magnitude—10% or less over the two to ten year time horizon, as we saw above.

The next pair of bar graphs shows the state's share of employment variation during the same two periods from VARs in which the trends in all the variables have been removed. Note that the Connecticut-specific share of employment variation is significantly larger than the previous estimates—in both time periods and at most time horizons. Note, too, the more obvious increase in the state's share during the second time period. The detrended VAR suggests that a larger share of employment variation originates within Connecticut and that proportion has grown in recent years.

The last pair of bar graphs shows similar results from VARs estimated using growth rates in U.S., regional and state employment. The Connecticut-specific shares of employment variance are larger still—by 20% to 30% for the Cold War period, and 30% to 40% more recently.

The upshot: tweaking the model doesn't alter the basic conclusion. After one or two quarters, most of the variation in Connecticut jobs arises from shocks originating outside the state, though probably less so now than in the past. And even if the most extreme estimates are right, that more than one-third of the variation in jobs arises endogenously, public policy is likely to control only a fraction of that percentage.

REPLAYING HISTORY

Another way to gauge the relative importance of the forces acting on Connecticut's economy is to use a VAR model to decompose the employment changes that actually occurred during a particular historical time period. (Each model we've looked at produces a similar decomposition so we'll return to our original VAR model in levels.)

Consider the period 2008 to the present, a time of severe recession and tepid recovery. The black line in graph four shows the difference between actual and predicted Connecticut employment. At its worst in 2010-Q1, Connecticut jobs were 6.6% below the VAR model's predicted employment level. The differential has narrowed since then, but by 2013-Q2 jobs were still 1% lower than predicted.

The difference between actual and predicted jobs is almost entirely explained by shocks originating at the U.S. level. The red line in the graph shows the share of Connecticut's poor job performance that traces to shocks originating in the U.S. portion of the model. The red line lies very near the black line throughout the recession and early recovery. That means shocks to the U.S. economy have accounted for nearly all the extraordinary jobs losses in Connecticut and for the tepid start to the recovery.

In early 2010, negative shocks in the Connecticut economy (green line) combined with the national shocks to create the widest breach between actual and forecast job values in the five-year period. Unfortunately, the model is silent as to the specific origins of the negative Connecticut shocks that added to the recession's severity. Variables not included in the model—like the high concentration of financial activities in Connecticut or the state's particularly deep cuts in public sector jobs—could have been factors behind the state's steep erosion of jobs.

Since 2011, however, state-specific shocks have largely helped to offset national drags on Connecticut's economy, while regional shocks have served to aggravate the state's sluggish job growth. Again, the exact source of the region's sub-par performance is beyond the scope of the model. But except for the previously mentioned finance and government sectors, as well as information and manufacturing, Connecticut's separate industry sectors have generally outpaced those in the rest of New England throughout the recovery period.

GIVE UP OR GET BUSY?

The anatomy of the recent recession and recovery reveals both the considerable influence broader forces have on state outcomes and the limits of our own powers. So should we throw up our hands in defeat or redouble our efforts to make a difference?

One corollary of these constraints is that while our leverage might be limited, it's not insignificant. We can't expect miracles, but even small changes, added up over many years, might have a considerable effect.

Another corollary is that we may have a smaller margin for error than we may have hoped. When power is limited it's all the more important to use that influence to certain effect which, in turn, raises the stakes on getting the policy right.

But there's never a guarantee that results will arrive in time for the next election, so the danger is we might be tempted to abandon a good policy too soon, simply because we don't have the patience (or foresight) to see it through to its beneficial conclusion. Cycling through numerous aborted development efforts might be just as bad, or worse, than doing nothing at all.

EMPLOYMENT EFFECTS OF RESEARCH UNIVERSITIES

BY DENNIS HEFFLEY

Economists have long recognized the role of education in promoting economic growth and wellbeing. As the U.S. and other economies have become more "knowledge-based," the links between education and economic activity have become even stronger. Once regarded as intellectual islands with limited impact on state (let alone national) economies, major universities have been portrayed more recently as economic "drivers" that shape the nature and growth of output and employment. But is there some empirical evidence of a relationship between research universities and economic activity?

Universities are centers of employment, but they also may induce both immediate and longer-term "multiplier effects" on employment in other sectors. Shorter-term effects include non-university economic activities that serve the daily needs of the academic institution, its students, and university employees: off-campus housing, restaurants and retail shops, to name a few. More systemic and longer-term effects include employment and output in spinoff industries that rely more directly on the knowledge and entrepreneurial skills that universities help to cultivate. These longer-term impacts are more likely to emerge from major research universities, via their collaboration and bilateral transfer of knowledge with the business community.

These academic-business bonds are readily apparent in places like California's Silicon Valley, Massachusetts' Route 128, and North Carolina's Research Triangle, but we may be able to quantify the broader economic effects of research universities. The Carnegie Foundation for the Advancement of Teaching has produced a university classification system (http://classifications.carnegiefoundation.org/lookup_listings/standard.php) that identifies 108 research universities with *very high research activity* (RU/VH), 99 research universities with *high research activity* (RU/H), and 90 *doctoral/research universities* (DRU). Combining this information about the number of each of these different types of research-oriented institutions with other data about the states they occupy, we can see if there is any preliminary evidence of a relationship between the presence of such institutions and state-level employment in other sectors.

THE MODEL

The question we explore here is: Are various types of research universities positively associated with employment, and are these links stronger for more research-intensive institutions, as categorized by the Carnegie Foundation?

We are primarily interested in how public and private research universities affect *private sector non-education employment*, so it makes sense to net out all public employment as well as any private sector employment in education. This can be done using state-level Bureau of Economic Analysis (BEA) data. Private non-farm employment (to net out any public sector employment, including public education) less any private education employment gives a measure of *private non-education employment*.

Next, to facilitate comparison across states of different size, we divide this employment variable by population to get *private non-education employment per capita*. This ratio may be influenced by a variety of factors, but we control for several ones that might reasonably affect private non-education employment per capita: percent of state population of "working age" (18-64 years of age), percent of state residents who are non-white, percent of the age 25+ population with at least a bachelor's degree, and population density (persons per square mile of land area). Beyond these control variables, we include the three variables of primary interest: the state's number of universities in each of the three categories reported by the Carnegie Foundation (RU/VH, RU/H, and DRU) per 10,000 state residents. Using multivariate regression analysis to estimate the relationship between employment intensity and the seven

TABLE 1 DO RESEARCH UNIVERSITIES BOOST EMPLOYMENT?

Dependent Variable: Private Non-education Employment Per Capita (2011)	Coefficient	Standardized Coefficents	p-Value	Elasticity
Intercept	0.2665		0.2180	0.5639
Percent 18-64 Years	0.0011	0.0316	0.7706	0.1397
Percent Non-White	-0.0011	-0.3212	0.0033	-0.0525
Percent BA or Higher	0.0048	0.5309	0.0001	0.2768
Population Density	-0.0000	-0.1726	0.1403	-0.0117
# Research Universities/Very High (RU/VH)	3.5344	0.2515	0.0146	0.0290
# Research Universities/ High (RU/H)	3.2270	0.3991	0.0015	0.0353
# Doctoral Research Universities (DRU)	4.7341	0.2736	0.0158	0.0195
Adjusted R-Square: 0.572				
Observations: 50 States				

SOURCE: Developed by *The Connecticut Economy* based on data from the Carnegie Fundation for the Advancement of Teaching, the U.S. Census Bureau, and the Bureau of Economic Analysis.

variables, we get the results shown in the first table.

RESULTS

The model's overall explanatory power is reasonably good. The seven variables jointly account for about 57 percent of the total variation in private non-education employment per capita (2011) across states. Most of the seven regression coefficients have the anticipated signs and are statistically significant at the five percent level or better. Controlling for other factors in the model, private non-education employment per capita is: higher when the 18-64 age group represents a larger share of the population, lower when the minority percentage of the population is larger, higher when the percentage of the age 25+ population with at least a bachelor's degree is larger, and lower when population density is greater. The coefficients for the three research university variables—our primary focus—are of similar magnitude (3.53, 3.23, and 4.73) and statistical significance, suggesting that states with research universities benefit not only from the direct employment in those institutions, but also from higher private non-education employment per capita.

With perhaps the exception of the working age and educational attainment variables, most of the estimated elasticities are quite small. The standardized coefficients show the effect of a one standard deviation change in each explanatory variable on private non-education employment per capita, also measured in standard deviation terms. The three research university variables again have standardized coefficients of roughly similar magnitude (0.25, 0.40, and 0.27), which compare favorably with the standardized coefficients of other variables in the regression.

More detailed analysis is needed to better assess the employment benefits of various types of research universities, however, county-level analysis is hampered by federal data disclosure policies that lead to a large loss of observations. Nevertheless, based on the preliminary analysis of state-level data, encouraging and maintaining a high level of university research activity appears to have tangible economic benefits in the form of non-education employment opportunities in the private sector.

CAVEATS AND A CLOSER LOOK

Simple regression analysis is hard-pressed to demonstrate *causality*, but it goes a step further than simple claims that universities boost local and state economies. Among other shortcomings of the model, there likely are many other (excluded) factors that potentially affect employment intensity. Inclusion of such omitted variables would affect the value of estimated coefficients of the variables already included in the model. For the econometrician, the trade-offs between completeness simplicity, and validity of the model are familiar ones.

Despite limitations, however, the link between university-level research and jobs may be understated in the analysis, due to the selective nature of the Carnegie Foundation list. To see this, it helps to consider the institutions that were included in the list, as well as some that were not.

In general, New England is blessed with a wide variety of private and public colleges and universities, but only some of these institutions were included in the earlier analysis. The second table lists the three types of universities (RU/VH, RU/H, and DRU) for each of the six New England states.

Boasting 12 schools in the three categories (6, 5, 1), including two of the top universities in the world, Harvard and MIT, Massachusetts clearly stands out as a major center of research-intensive education. For its size, Connecticut also fares well in having two universities, Yale and UConn, in the top-tier. The only other state university in New England to make the top list of universities with very high research activity (RU/VH) is UMass-Amherst. The other New England state universities appear in the second group (RU/H).

The Carnegie Foundation study and other such academic rankings are useful but incomplete in assessing the importance of university-based research and doctoral education. Graduate education is an expensive proposition (smaller classes, graduate fellowships, costly labs and materials, etc.) with high start-up costs, so many four-year colleges specialize in undergraduate education. But this does not mean that faculty members are uninvolved in research. Connecticut schools like Wesleyan, Connecticut College, Trinity, Hartford, Fairfield, Quinnipiac and others, as well as many such schools in other New England states, boast many outstanding educators who contribute to the economy through their teaching and research.

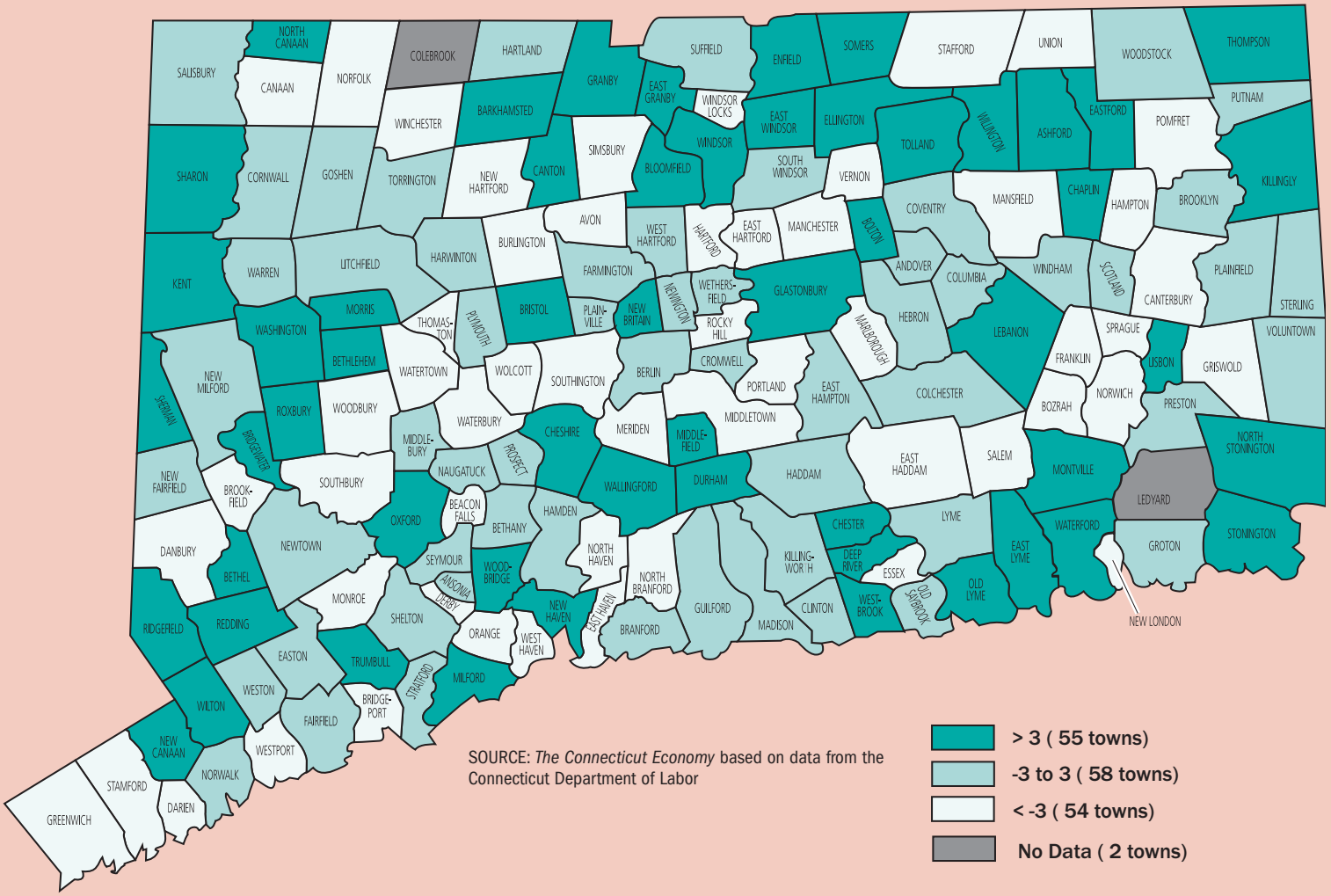
TABLE 2 NEW ENGLAND'S RESEARCH UNIVERSITIES

	RU/VH	RU/H	DRU
CONNECTICUT	UConn, Yale		
MASSACHUSETTS	Boston Univ, Brandeis, Harvard, MIT, Tufts, UMass	Boston College, Clark, Northeastern, UMass-Bos, UMass-Lowell	Worcester Polytechnic
MAINE		Univ of Maine	
NEW HAMPSHIRE	Dartmouth	Univ of New Hampshire	
RHODE ISLAND	Brown	Univ of Rhode Island	
VERMONT		Univ of Vermont	

SOURCE: Developed by *The Connecticut Economy* based on data from the Carnegie Fundation for the Advancement of Teaching.

THE CENTERFOLD

The Changing Ratio of Jobs to Employment, 2002—2012



SOURCE: *The Connecticut Economy* based on data from the Connecticut Department of Labor

	JOBS	JOBS/EMP	RATIO CHANGE
Bridgeport - Stamford LMA			
Ansonia	3794	41.1	-0.6
Bridgeport	42548	72.9	-11.3
Darien	7679	87.7	-3.7
Derby	4801	74.9	-4.6
Easton	912	25.8	2.3
Fairfield	23996	88.5	1.0
Greenwich	34803	124.7	-4.3
Milford	28392	101.9	3.0
Monroe	5381	54.6	-11.2
New Canaan	6371	77.0	4.9
Newtown	7609	55.7	-1.5
Norwalk	44034	96.1	-1.5
Oxford	3079	44.7	11.4
Redding	1639	36.2	8.1
Ridgefield	10297	91.6	9.0
Seymour	4284	50.0	-2.5
Shelton	21490	102.4	1.4
Southbury	8513	100.9	-16.5
Stamford	74081	116.9	-6.5
Stratford	25098	101.5	-2.4
Trumbull	16267	95.2	6.7
Weston	1223	26.7	-2.1
Westport	15267	129.5	-15.7
Wilton	10712	135.9	10.8
Woodbridge	3654	82.9	12.6

	JOBS	JOBS/EMP	RATIO CHANGE
Danbury LMA			
Bethel	7027	68.9	6.2
Bridgewater	241	27.3	4.4
Brookfield	6786	79.0	-9.5
Danbury	42642	99.8	-7.0
New Fairfield	1596	22.8	1.4
New Milford	8404	56.2	-1.9
Sherman	445	25.0	5.3
Enfield LMA			
East Windsor	7309	123.1	3.4
Enfield	18630	87.0	4.3
Somers	2522	56.1	5.3
Suffield	4130	57.8	0.9
Windsor Locks	13121	203.6	-28.9

	JOBS	JOBS/EMP	RATIO CHANGE
Hartford LMA			
Andover	361	19.1	1.5
Ashford	537	22.9	4.1
Avon	8367	93.5	-18.8
Barkhamsted	1145	54.9	26.0
Berlin	11448	111.2	1.6
Bloomfield	19058	210.2	16.1
Bolton	1250	45.8	8.3
Bristol	21079	68.5	3.6
Burlington	875	17.3	-6.3
Canton	3219	59.0	7.8
Colchester	3608	43.0	-0.2
Columbia	1049	36.2	1.2
Coventry	1353	20.6	2.4
Cromwell	6474	87.0	2.4
East Granby	3792	137.9	37.2
East Haddam	1407	28.5	-3.5
East Hampton	1861	27.9	-1.5
East Hartford	28635	119.9	-7.2
Ellington	3220	36.9	4.1
Farmington	30195	249.3	0.8
Glastonbury	16159	91.9	4.7
Granby	2336	39.6	3.7
Haddam	1299	26.8	-1.2
Hartford	110964	260.6	-10.5
Hartland	145	12.8	0.3
Harwinton	580	19.8	-2.7
Hebron	1781	33.4	1.5
Lebanon	1348	34.1	4.4
Manchester	27795	90.8	-6.8
Mansfield	10998	85.3	-4.2
Marlborough	1129	33.2	-5.8
Middlefield	1762	77.4	5.7
Middletown	27466	112.5	-7.2
New Britain	25321	79.6	3.4
New Hartford	1447	40.3	-7.1
Newington	16124	102.2	-2.5
Plainville	9333	99.1	-0.3
Plymouth	1997	32.1	-1.6
Portland	2223	45.2	-23.3
Rocky Hill	13725	132.3	-5.9
Simsbury	9642	86.5	-13.2
South Windsor	12426	91.8	2.2
Southington	14799	65.1	-4.7
Stafford	3535	55.5	-8.5
Thomaston	2691	64.2	-9.4
Tolland	4403	55.4	12.2
Union	114	22.9	-4.9
Vernon	8363	53.6	-5.9
West Hartford	27577	98.5	0.8
Wethersfield	9939	79.4	-1.8
Willington	1419	40.3	14.4
Windsor	23587	158.0	31.9
New Haven LMA			
Bethany	1092	37.6	-0.2
Branford	12400	80.6	-2.3
Cheshire	15162	111.2	10.6
Chester	2101	95.2	6.8
Clinton	4195	58.5	0.0
Deep River	1471	62.4	11.4
Durham	2128	53.3	8.5
East Haven	6366	42.6	-3.5
Essex	3481	100.2	-4.5
Guilford	6820	56.6	2.7
Hamden	20106	67.8	-0.4
Killingworth	670	19.7	1.0
Madison	4790	52.7	-2.0
Meriden	22335	76.4	-13.1
New Haven	79279	153.7	3.5
North Branford	4400	57.2	-4.0
North Haven	18802	154.8	-28.5
Old Saybrook	5831	117.9	-1.4
Orange	9456	139.4	-8.1
Wallingford	27019	115.3	4.0
West Haven	14477	51.3	-10.7
Westbrook	3862	108.0	17.6
Norwich - New London LMA			
Bozrah	1012	72.0	-3.9
Canterbury	491	17.2	-3.5
East Lyme	5436	61.1	6.3
Franklin	1014	95.2	-29.3
Griswold	1293	19.4	-8.5
Groton	25754	150.7	-0.3
Ledyard	12195	160.7	N/A
Lisbon	1787	76.0	27.3
Lyme	205	17.3	1.6
Montville	13901	144.4	5.6
New London	14128	112.3	-15.7
North Stonington	1460	49.2	3.5
Norwich	16702	83.1	-9.8
Old Lyme	2615	67.8	11.6
Preston	805	32.7	-0.6
Salem	612	25.9	-7.1
Sprague	567	36.0	-12.9
Stonington	7131	74.8	7.2
Voluntown	311	21.9	0.5
Waterford	11010	114.6	6.0
Torrington LMA			
Bethlehem	711	37.5	7.8
Canaan	813	128.5	-20.1
Colebrook	N/A	N/A	N/A
Cornwall	430	57.8	2.7
Goshen	393	27.6	-2.2
Kent	1304	87.0	4.3
Litchfield	3319	83.5	-0.9
Morris	463	38.2	9.1
Norfolk	324	35.9	-8.9
North Canaan	1872	118.8	7.2
Roxbury	331	26.4	4.2
Salisbury	1928	112.5	0.2
Sharon	1231	91.8	20.8
Torrington	15537	87.1	-2.3
Warren	145	19.7	-1.6
Washington	1549	88.1	5.3
Winchester	3432	60.3	-9.0
Woodbury	2100	40.0	-6.2
Waterbury LMA			
Beacon Falls	855	27.6	-5.0
Middlebury	3846	104.5	0.1
Naugatuck	7406	49.0	0.3
Prospect	2012	42.1	-0.3
Waterbury	38363	87.0	-4.1
Watertown	8009	72.4	-7.6
Wolcott	2836	34.5	-3.3
Willimantic - Danielson LMA			
Brooklyn	1420	38.8	-1.6
Chaplin	345	28.2	7.3
Eastford	535	59.1	13.1
Hampton	156	15.8	-3.0
Killingly	8335	99.9	3.8
Plainfield	4104	54.8	0.1
Pomfret	1546	73.1	-7.0
Putnam	6193	127.7	-0.6
Scotland	133	14.2	-2.8
Sterling	403	20.7	-2.5
Thompson	1614	32.7	4.2
Windham	10621	98.8	-2.0
Woodstock	1693	40.6	-2.9
Town Average	9411	73.0	0

ABOUT THE CENTERFOLD

The centerfold includes town data on jobs, the ratio of jobs to employment (J/E), and the change in that ratio from 2002 to 2012. Whereas jobs measures the number of positions with employers in town, employment measures the number of town residents who are working. Towns with more jobs than employed residents have a J/E ratio greater than 100 so local employers, on net, need to import workers from other towns to fill available openings. The ratio thus offers a crude measure of the degree to which towns export jobs.

The highest J/E ratio in the state, 265, belongs to Hartford. The city has nearly 111,000 jobs but fewer than 43,000 employed residents. The difference between the two, 68,000, is also higher here than in any other town in the state. Other towns with large J/E ratios include New Haven, Farmington, Bloomfield, and Windsor Locks.

The lowest J/E ratio, 12.8, belongs to tiny Hartland. With just 145 jobs in town, nearly all of its 1,132 employed residents must find work elsewhere. The two low J/E towns with the largest number of net out-commuters are Bridgeport (15,800) and West Haven (13,800).

The map shows the change in the ratio of jobs to employment across Connecticut towns from 2002 to 2012. In towns shaded dark green, job growth has outpaced employment growth, so these towns are developing a job export capacity, though they are not necessarily net job exporters yet.

CONNECTICUT NEEDS A BETTER VALUE PROPOSITION

DOUGLAS G. FISHER*

Having worked on the front lines of economic development in Connecticut for 20 years, I can vouch for the challenge of marketing our state to business executives. That's because Connecticut today lacks a compelling value proposition. Without one, it's tough to differentiate our state from its competitors, especially those in the Northeast.

Companies weighing an expansion or relocation decision engage in a site elimination process. Executives, and the consultants they retain, look for reasons to whittle down many options to a few places with important advantages and minimal risks.

Chief among their needs are a favorable business environment and a welcoming attitude at both the state and local levels. A location need not be the "cheapest" option, but significant benefits must counter higher costs. Businesses want a skilled, growing workforce; shovel-ready land or usable buildings; predictable taxes; competitive energy costs; and land-use regulations that make sense and don't impede expansion or growth.

Incentives can help blunt deficiencies, but they are typically minor factors that influence a decision late in the process. Bottom line: The economic fundamentals of an area have to be right, or a state rarely ends up talking to serious business prospects.

So ask yourself: What would motivate a company to expand in Connecticut in 2013? Low taxes? Plentiful, qualified and affordable labor? Cheap energy? Excellent infrastructure? Business-friendly regulatory practices? Peruse any list of top ten business location factors, and you can see the state's problem.

WE CAN'T BE "STILL" MUCH LONGER

Connecticut still fares well on most general measures of educational achievement, as well as the health of its population, patents, technology assets and certain lifestyle factors. Above-average wealth makes the state a good consumer market. Connecticut's proximity to the global centers of New York City and Boston is a major advantage, and a substantial base of executive talent still resides here.

We still have productivity levels better than the nation. We still have higher than U.S. average employment concentrations in manufacturing and finance. We still have lots of nice homes and amenities. And our clever state slogan tells the world that we're "Still Revolutionary" … but for how much longer?

Sadly, many key Connecticut economic trends are on a slow, downward path. We've slipped in areas that made our state an economic success, and we're still declining.

Among the chief reasons for concern:

• Connecticut has the same level of nonfarm employment today (1.66 million) as it did 25 years ago. Modest growth of late can't dent its jobless rate of 8.1 percent, and the state has recouped just over half of the 114,000 jobs lost between 2008 and 2010, one of the slowest recovery rates in the U.S.

• Connecticut has the nation's highest level of unfunded state liabilities and looming budget holes that will virtually ensure higher taxes. Barron's magazine says the state is in the worst financial shape in the country, with debt and pension liabilities at 17.1 percent of its gross state product.

• Federal data shows Connecticut's economy has shrunk two years in a row and ranks 50th in growth. The American Legislative Exchange Council ranks Connecticut 46th for economic performance and 43rd for economic outlook.

• The state's shrinking labor force is alarming: After 28 months of successive, year-over-year declines, there are now 29,300 fewer people in Connecticut's workforce. The state's population is already one of the oldest in the nation, and aging rapidly. Meanwhile, the cost of skilled labor escalates as companies unable to find qualified help among the unemployed must hire away employees from other companies at a premium.

• From 2000 to 2010, a net 94,376 residents left for other states. According to the Tax Foundation, $4.5 billion (net) in personal income left Connecticut during those years, the 10th largest outflow of wealth from any state in the nation.

• Connecticut's steep electric and gas rates and its nation-leading taxes on gasoline (at 45 cents per gallon—80 percent higher than the New England state average) hinder business expansion and erode households' spending power. Yet our highway system is ranked 44th in the nation. The Reason Foundation's 2013 Annual Highway Report notes: "Connecticut ranks 46th out of 50 in deficient bridges, 47th in urban interstate congestion … and ranks last, 50th (for) spending over seven times the national average per mile on administration."

• Manufacturing and financial services have formed the backbone of Connecticut's economy for 150 years. How are they doing? Our manufacturing base, down 3,900 jobs over the past year, continues to erode and now represents just over 10 percent of the state's jobs (vs. 23 percent in 1988). Meanwhile, insurance and

financial services employment—the fastest growing sector of the economy over the past two years—contracted by 1,700 jobs from July 2012 to July 2013 in Connecticut. Hartford, once the undisputed Insurance Capital of the World, has been supplanted by upstart Des Moines, Iowa, according to BusinessWire, which calls the Midwest city, "the number one spot for insurance companies."

• National rankings are often dismissed by political leadership, but they matter, because they help mold and reinforce perceptions, be they positive or negative. In recent months, CNBC ranked Connecticut 45th relative to overall business climate. Forbes called the state, "One of America's Worst Performing Economies." Chief Executive magazine's 2013 poll placed Connecticut 44th, nationally. Piling on, TopRetirements.com lists Connecticut and Illinois as tied for the worst states in which to retire.

Those who analyze economic and demographic trends are worried for Connecticut, though they often temper their concerns for public consumption. None of this data is a secret to the site consultants and real estate executives who recommend corporate locations.

Some lament how Connecticut companies and citizens seem "negative." But a sour attitude is not in the water here. It's an understandable reaction to successive legislatures too eager to tax and spend money we don't have, and a failure to recognize the fact that the average Connecticut family is just that—pretty average, despite the state's high per capita income.

LET'S TURN THINGS AROUND

Connecticut's leadership needs to change, fundamentally, how it views and interacts with overburdened business and residential taxpayers who are losing ground and hope. Start asking, and keep asking, how the state can help companies and entrepreneurs do business in ways that are easier, quicker and less costly.

Here are four ways to provide the market differentiation Connecticut needs:

• **Eliminate the Corporate Income Tax**. With institution of a personal income tax in 1991, Connecticut lost its chief marketing tool: the ability to sell itself as a relative bargain in the region. State spending has since tripled, while the income tax has been increased and made much more costly (progressive) for higher-income wage earners, encouraging their exit from the state and making the tax much more volatile. Repeal of the income tax, which now raises 44.5 percent of the state's annual General Fund revenue, no longer seems possible. But elimination of the corporate income tax, which raises a relatively paltry 3.6 percent of Connecticut's tax base, would be. Why bother? To create a market niche and allow the state to position itself again as a tax haven in the tri-state (CT-NY-NJ) region. The ability to offer business executives a genuine tax advantage is the kind of conversation starter Connecticut has lacked for two decades.

• **Make Business Regulations "Swift, Certain and Simple."** Launch a comprehensive review of every state regulation governing business expansion for the sole purpose of eliminating those that stand in the way of growth. If a regulation does not help make legitimate business expansion swift, certain and simple, eliminate it, alter it, or seek its repeal through legislation. Push hard for municipalities to do the same. Enlist private sector leaders to lead the process. The publicity around a bona fide effort to make the state truly ETDBW (Easy To Do Business With) would transform its reputation from hostile to business friendly. The legislature can show the state is serious by including a sunset provision forcing a review of every new regulation's effectiveness after no more than three to five years.

• **Grant the "Right to Work."** The ability of an individual to choose whether to join a labor union—rather than being forced to pay dues to a union as a condition of employment—should be a fundamental right in the United States. Plenty of other states think so, including, of late, the former organized labor bastions of Michigan and Indiana. There are now 24 Right to Work states in the country that allow workers this right to choose. Most importantly, there is a direct correlation between states with these laws in place and positive job and economic growth. While only 14 percent of workers in Connecticut are members of unions—and the majority of those are public employees—the pro-business psychology behind this change would be dramatic. Connecticut would do itself a huge favor by becoming the only state between Maryland and Maine to embrace this reform.

• **Make Hartford an IFS Tax Mecca.** We must stem employment losses in the legacy Insurance and Financial Services (IFS) sector here in Connecticut while it grows steadily elsewhere. Statewide, high-wage financial services jobs have declined 15.5 percent, from 155,000 to 131,000, over the past 20 years. A short-term fix needs to be in place until we come to grips with how to fix our business climate, especially for IFS firms. One local idea: Make any incremental jobs created by relocations or expansions into Hartford's central business district property and corporate tax free for five years. Now that would be a marketing hook and force IFS firms to seriously consider our capital city.

These ideas are feasible and laser-focused on economic growth. And robust growth is exactly what Connecticut needs. Political courage is required, but the dividends would be quick, evidenced first by a reversal of Connecticut's national business rankings. And that would bode well for all of us.

* Douglas G. Fisher is a senior vice president with Goman+York Property Advisors of East Hartford. He edited the Connecticut Economic Review marketing publications from 1999-2013 and led the economic development department for Northeast Utilities, where he formulated business recruitment strategies for 17 years. He currently serves as executive director of New England's Knowledge Corridor, which promotes the interstate, Hartford-Springfield region.

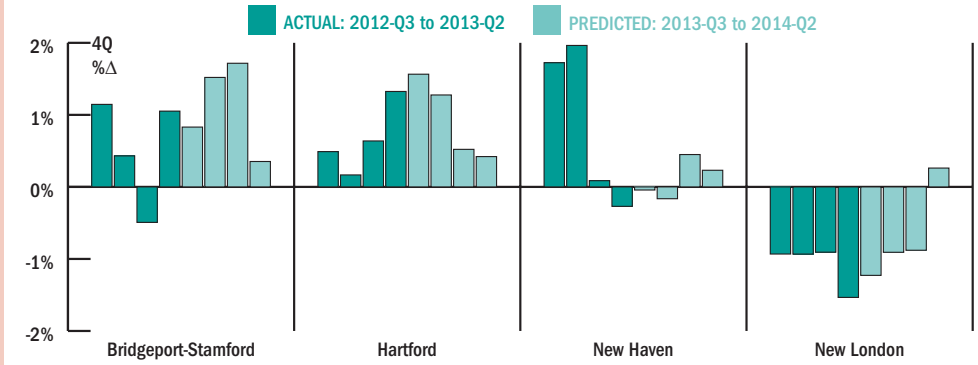
LABOR MARKET OUTLOOK

Forecasts for Key Labor Market Areas

BY STEVEN P. LANZA

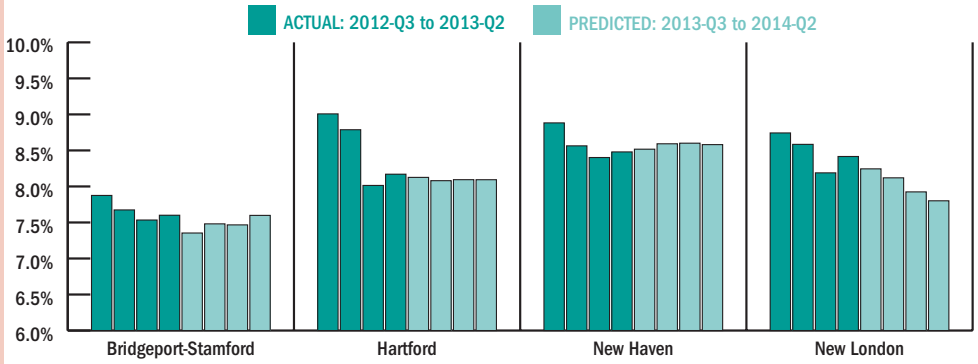
JOBS

Nonfarm jobs rose moderately during the four quarters ended 2013-Q2 in both Hartford and Bridgeport-Stamford but slumped again in New Haven and New London. The gathering recovery could, however, bring four-quarter job growth to all regions by the same quarter next year. Hartford and Bridgeport-Stamford should enjoy the healthiest gains, 2,300 and 1,400 jobs respectively. In New Haven, and long-suffering New London, any additions will likely accrue in the hundreds rather than the thousands.



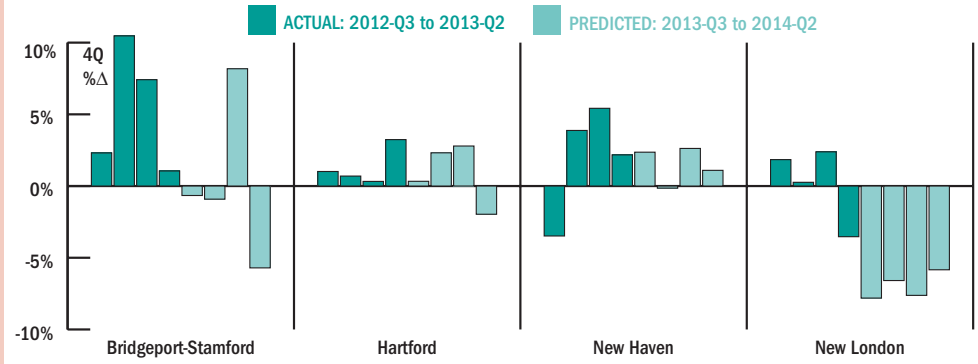
UNEMPLOYMENT RATE

Against a backdrop of generally declining unemployment rates over the last few years, joblessness registered a rare uptick across major labor market areas in 2013-Q2. Unemployment should hold relatively steady in coming quarters, though it could inch up a bit more if improved job prospects lure entrants to the labor force. New London, which has weathered the most severe erosion of its labor force, is most likely to see jobless rates slip.



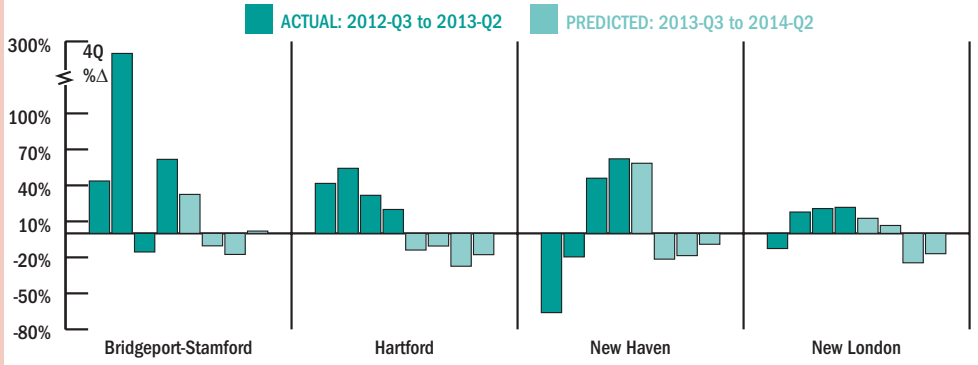
HOUSING PRICES

Median home prices, as reported by the National Association of Realtors, moved up in the quarter and over the year in three of the four major labor market areas of the state. Except for New Haven, where the small, but steady, increases should go on, a continued price rebound across regions isn't guaranteed. Though Bridgeport-Stamford should bob along at the $400,000 mark, Hartford could slip below $225,000 and New London below $170,000.



HOUSING PERMITS

New residential housing permits have enjoyed a bit of a renaissance of late, particularly in the Hartford and Bridgeport-Stamford labor market areas. The outlook calls for permits to remain above their recession lows, though below their recent high water marks. For Hartford, the four-quarter changes are likely to the downside; while for the other major regions expect more of a mixed bag.



LABOR MARKET DATA

2013-Q2 Summary Statistics

Unemployment inched down across regions amid shrinking labor pools and expanding job rosters. Construction, leisure and hospitality, and education and health care offered workers the most new employment opportunities. Housing permits climbed nearly everywhere while median home prices advanced in three of the four major labor market areas.

	LABOR FORCE		UNEMPLOYMENT RATE		NONFARM JOBS		CONSTRUCTION JOBS		MANUFACTURING		TTU* JOBS	
Labor Market Area	2013-Q2 (000)	% Change year ago	2013-Q2 (%)	2012-Q2 (%)	2013-Q2 (000)	% Change year ago	2013-Q2 (000)	% Change year ago	2013-Q2 (000)	% Change year ago	2013-Q2 (000)	% Change year ago
Bridgeport - Stamford	474.2	-1.4	7.4	7.7	413.0	1.2	12.2	3.4	33.4	-2.0	70.5	-1.6
Danbury	91.4	-1.0	6.3	6.6	68.8	1.6	-	-	-	-	15.8	5.3
Enfield	48.5	-3.1	7.9	8.1	45.7	0.1	-	-	-	-	-	-
Hartford	587.1	-1.2	8.0	8.3	550.5	1.2	19.8	14.2	56.7	-1.6	88.0	1.1
New Haven	310.4	-2.2	8.3	8.6	273.3	-0.2	8.8	-2.6	25.5	-2.0	49.0	-0.7
Norwich - New London	144.8	-3.4	8.2	8.5	127.1	-1.6	3.7	7.8	14.2	0.2	22.6	-1.3
Torrington	53.7	-1.7	7.3	7.6	36.3	1.4	-	-	-	-	-	-
Waterbury	99.3	-1.9	10.7	10.9	63.0	-0.2	2.2	-4.3	7.6	-0.9	12.3	-0.3
Willimantic - Danielson	57.3	-1.4	9.2	9.7	37.0	1.6	-	-	-	-	-	-
STATEWIDE	**1854.8**	**-1.7**	**8.0**	**8.3**	**1659.9**	**0.8**	**55.3**	**6.0**	**162.3**	**-2.0**	**296.2**	**0.3**

*Trade, Transportation and Utilities

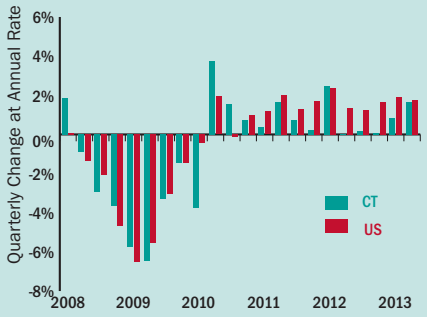
	INFORMATION JOBS		FINANCE JOBS		BUSINESS SERVICES		EDUCATION & HEALTH		LEISURE & HOSP.		OTHER JOBS	
Labor Market Area	2013-Q2 (000)	% Change year ago	2013-Q2 (000)	% Change year ago	2013-Q2 (000)	% Change year ago	2013-Q2 (000)	% Change year ago	2013-Q2 (000)	% Change year ago	2013-Q2 (000)	% Change year ago
Bridgeport - Stamford	11.0	0.0	40.2	-2.2	71.0	3.0	71.0	3.3	40.3	5.4	16.9	0.0
Danbury	-	-	-	-	7.9	1.3	-	-	6.4	2.7	-	-
Enfield	-	-	-	-	-	-	-	-	-	-	-	-
Hartford	10.9	1.9	60.1	-1.4	64.0	1.1	100.2	2.3	46.3	2.6	20.3	-1.5
New Haven	4.2	-1.6	12.0	-1.1	27.0	-2.9	77.7	1.0	25.3	6.6	10.5	-0.6
Norwich - New London	1.4	0.0	3.1	-1.1	8.9	-2.6	21.2	1.4	14.7	-6.8	3.4	1.0
Torrington	-	-	-	-	-	-	-	-	-	-	-	-
Waterbury	0.6	0.0	2.0	0.0	4.4	-1.5	16.4	1.0	5.1	-1.9	2.3	-1.4
Willimantic - Danielson	-	-	-	-	-	-	-	-	-	-	-	-
STATEWIDE	**30.9**	**-0.4**	**130.6**	**-1.6**	**207.2**	**1.1**	**323.6**	**1.9**	**151.1**	**3.6**	**61.6**	**0.3**

	GOVERNMENT JOBS		HOUSING PRICES		HOUSING PERMITS		AVG. WKLY. HOURS		AVG. WKLY. EARNINGS		AVG. HRLY. EARNINGS	
Labor Market Area	2013-Q2 (000)	% Change year ago	2013-Q2 ($000)	% Change year ago	2013-Q2	% Change year ago	2013-Q2	% Change year ago	2013-Q2 ($)	% Change year ago	2013-Q2 ($)	% Change year ago
Bridgeport - Stamford	46.5	1.8	425.9	1.1	328	60.8	35.1	2.2	1065.17	-1.8	30.32	-3.9
Danbury	8.6	-0.8	-	-	132	-42.9	32.8	-0.9	943.93	3.8	28.78	4.8
Enfield	-	-	-	-	20	0.0	-	-	-	-	-	-
Hartford	84.2	1.3	234.2	3.5	358	17.0	34.4	-2.4	976.71	-4.1	28.42	-1.8
New Haven	33.1	-2.2	228.4	2.2	99	59.7	33.5	0.8	891.64	1.2	26.59	0.4
Norwich - New London	34.0	-3.0	179.7	-3.7	84	21.7	33.5	6.0	869.05	13.4	25.92	7.0
Torrington	-	-	-	-	21	133.3	-	-	-	-	-	-
Waterbury	10.0	1.0	-	-	42	75.0	33.0	-1.9	789.47	0.6	23.92	2.6
Willimantic - Danielson	-	-	-	-	22	46.7	-	-	-	-	-	-
STATEWIDE	**241.0**	**0.4**	**-**	**-**	**1106**	**17.7**	**33.7**	**-0.6**	**945.10**	**-0.8**	**28.02**	**-0.2**

THE QUARTERLY FORECAST

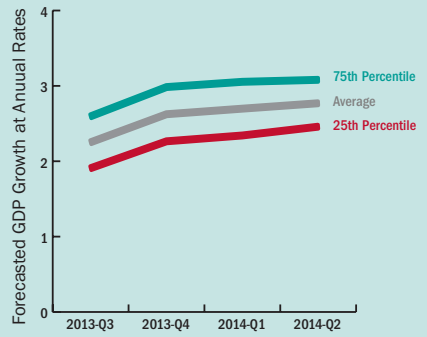
Finally Gaining Traction

CT JOB GROWTH IS BACK ON TRACK...



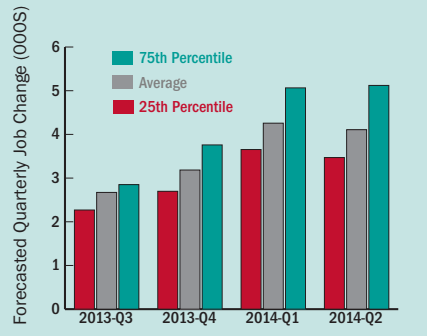
SOURCE: *The Connecticut Economy*, based on data from the Bureau of Labor Statistics.

...AND IF THE U.S. ECONOMY PICKS UP SPEED...



SOURCE: *The Connecticut Economy*, based on survey data from the *Wall Street Journal*.

...CT'S JOB COUNT SHOULD GROW APACE



SOURCE: *The Connecticut Economy*.

BY STEVEN P. LANZA

The economy finally seems to be gaining some traction as businesses nationally join households in loosing their purse strings just as the worst effects of contractionary federal fiscal policy appear to have passed. In Connecticut these developments helped accelerate job growth from a standstill as recently as 2012-Q4, to a jump of nearly 6,800 in 2013-Q2 (first graph). Indications are the job gains will continue.

Connecticut's second-quarter, 6,800-job increase followed a first quarter gain that topped 3,400. And preliminary numbers from July show a stunning 11,000—job advance from June. But view the monthly numbers with caution. Connecticut has averaged monthly job growth of fewer than 1,300 since the recovery began in 2010, yet the changes often varied by more than 4,000 on either side of that mark in any given month. It's not at all unusual to see jobs fall by 3,000 one month, only to rise by 5,000 the next.

Economic forecasters surveyed by the *Wall Street Journal* expect U.S. GDP growth to average 2.6% over the coming four quarters along a gently rising trajectory (second graph). Given that pace of growth nationally, Connecticut should expect to notch a cumulative gain of 14,000 jobs during the period, with increases averaging just shy of 3,000 quarterly in the second half of this year but more than 4,000 quarterly in the first half of 2014 (third graph).

In recent days, though, the economy has exceeded most analysts' expectations. Housing, in particular, has become a real bright spot as new permits, residential investment, and home prices continue a steady march upward. If the optimists—those at the 75th percentile and above in the *WSJ* survey—prove right, U.S. GDP growth might reach 2.9% or higher in the next four quarters. That could translate into job gains of nearly 17,000 in the Nutmeg State over the same period, with quarterly increases topping 5,000 in early 2014.

It's possible, however, that rising interest rates could dampen future housing demand. What's more, uncertainty over the Fed's plan to wean the economy from its diet of quantitative easing, and over who might lead the Fed once outgoing Chair Ben Bernanke's term expires, plus the ever-present risk of more budget stalemates this fall, offer no guarantee of robust growth in coming quarters.

The pessimists—those at the 25th percentile and below in the *WSJ* survey—see U.S. growth reaching only 2.2% at best over the next four quarters. That would likely limit Connecticut job growth to barely 12,000 for the period.

What of July's astonishing 11,000-job gain? Even if it holds up against revisions, history shows it's unlikely we'll duplicate that feat any time soon. (Connecticut added 11,000 jobs or more in just a dozen months previously over the last 44 years.) Instead, the latest reading may simply signal an acceleration in Connecticut job growth that has, for the year to date, lifted monthly gains well above their 1,300 recovery average.

If Connecticut's trajectory has changed, that could raise the baseline forecast for job growth over the next four quarters from 14,000 to 16,000. In other words, a shift in the dynamics of state job growth has the potential to place us close to the "optimistic" path for jobs, even at a "middle-of-the-road" pace for U.S. GDP growth.

weaknesses, gaps and new needs as they emerge, and UConn is assuming its leadership role in economic development in many ways.

We are infusing new life into the state's small businesses by absorbing the activities of the Small Business Development Centers (SBDCs), funded through the Small Business Administration (SBA).

The steady march toward creating the UConn Technology Park marks a new era for the state. There, existing and new businesses will work shoulder-to-shoulder with researchers, faculty and students to explore, test and refine technologies, products and processes – and create new ones.

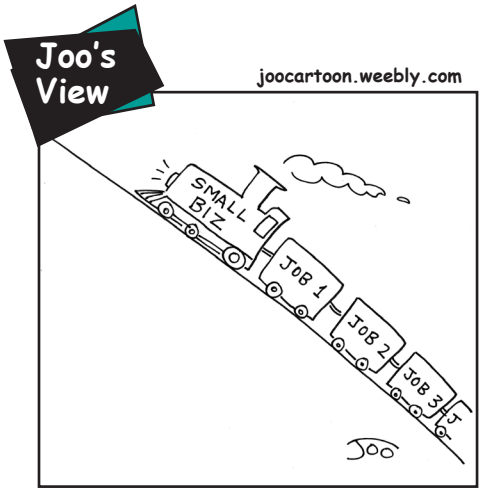
The states's recent commitment to fund Next Generation Connecticut will propel us even higher, allowing us to:

- Increase total enrollment by 6,580, or about 30 percent, including nearly 3,300 science, technology, engineering and math (STEM) students.
- Revolutionize the STEM infrastructure at Storrs by building facilities and laboratories to house materials science, physics, biology, engineering, cognitive science and genomics studies and related disciplines.
- Establish 50 STEM doctoral fellowships, creating the nation's premier STEM honors program, including a residential learning community.
- Expand the curriculum at UConn Stamford with a strong focus on fast-growing digital media and business fields, and establish student housing.
- Hire 259 new faculty members, including 200 dedicated specifically to STEM programs.
- Relocate the Greater Hartford campus from its aging West Hartford location to a vibrant downtown site.
- Invest $15 million at the Avery Point campus to modernize classrooms and labs and transform the dock area and waterfront operations.

True and lasting economic development involves an intricate system of partners, activities and outcomes. At UConn we are working closely with our partners in business and industry, the investment community and state and local governmental groups to revitalize the Connecticut economy. We have set in motion a collaborative process that will generate powerful results. These dynamics are making it happen:

- Growing university/industry collaborations. Corporate giants like GE and Pratt & Whitney are good examples of industrial powerhouses reaching out to UConn. We continue to seek such relationships.
- Leveraging for federal grants and contracts. We are stepping outside university comfort zones by developing more cross-disciplinary teams.
- Leading in cutting edge fields of discovery. UConn is developing new reservoirs of talent in science and technology by hiring scientists and eminent faculty to work with creative grad students and long-time faculty. Our leadership is recognized in many emerging fields, such as digital media, security hardware assurance, additive manufacturing and genomic medicine.

Young people studying at UConn know they are in the right place to build their futures. We hope you—our alumni, our industry connections and businesses—will join us on this exciting journey by serving as a mentor, collaborating with us on research, sharing ideas or hiring our students. Together we can elevate the trajectory of change, propel our state forward and bring great improvements to our society.



THE CONNECTICUT TRAVEL AND TOURISM INDEX

The overall index decreased 2.3% in 2013-Q2 compared with the same quarter the year before. The index consists of room occupancy, slot machine revenues, attendance at six major tourist attractions, and traffic on five tourist roads.

Room Occupancy	▲	+4.6%
Slot Machine Revenue	▼	-6.5%
Attendance	▼	-6.9%
Traffic	▼	-0.4%
Overall	▼	**-2.3%**

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A FORWARD LOOK

Turning Knowledge Into Economic Value

MARY HOLZ-CLAUSE, PH.D.
VICE PRESIDENT, UCONN OFFICE OF ECONOMIC DEVELOPMENT

New England has a remarkable legacy of putting new knowledge from its universities to work for the benefit of the local economy; and Connecticut is a leader in that practice. We follow the path set by Justin Morrill, a U.S. Senator from Vermont, who introduced legislation in the 1860s to create public land grant universities in the United States.

Historically, the covenant between a public university and the people of its state has been rooted in three principles: broad access, excellent curricula and research that has value. Public research universities, such as the University of Connecticut, have also served as engines of discovery to help the nation and the world deal with the intractable problems they face.

Economist Alan Greenspan reflected, "America's reputation as the world's leader in higher education is grounded in the ability of these versatile institutions, taken together, to serve the practical needs of the economy and more significantly to unleash the creative thinking that moves our society forward."

If Connecticut—including UConn—is to remain preeminent in transforming knowledge into economic value, we can't rest. We need to continuously generate scientific and technological breakthroughs, and simultaneously educate the workforce to understand and apply that knowledge.

Connecticut is recognized nationally for its economic development prowess. The state is #3 in high-wage traded services, foreign direct investment and industry investment in R&D; #5 in workforce education and initial public offerings; #6 in green economy; #7 in inventor patents; #8 in fast-growing firms; and #9 in manufacturing value added and the Milken State Technology and Science Index.

The numbers show a small state harvesting a wealth of ideas and pursuing excellence. We know we must continue to raise the bar to respond to

(continued on page 15)

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